

I. Listing of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A foamed isocyanate-based polymer derived from a reaction mixture comprising an isocyanate, an active hydrogen-containing compound, a phenolic resin and a blowing agent; wherein the phenolic resin: (i) is ~~substantially completely~~ free of ether moieties, and (ii) comprises a melting point in the range of from 50°C to 100°C.

2. (Currently Amended) The foamed isocyanate-based polymer defined in claim 1, wherein the active hydrogen-containing compound is selected from the group ~~comprising~~ consisting of polyols, polyamines, polyamides, polyimines and polyolamines.

3. (Original) The foamed isocyanate-based polymer defined in claim 1, wherein the active hydrogen-containing compound comprises a polyol.

4. (Cancelled).

5. (Cancelled).

6. (Cancelled).

7. (Original) The foamed isocyanate-based polymer defined in claim 3, wherein the polyol is a polyether polyol.

8. (Original) The foamed isocyanate-based polymer defined in claim 7, wherein the polyether polyol has a molecular weight in the range of from about 200 to about 10,000.

9. (Original) The foamed isocyanate-based polymer defined in claim 7, wherein the polyether polyol has a molecular weight in the range of from about 2000 to about 7,000.

10. (Original) The foamed isocyanate-based polymer defined in claim 7, wherein the polyether polyol has a molecular weight in the range of from about 2,000 to about 6,000.

11. (Cancelled).

12. (Cancelled).

13. (Cancelled).

14. (Cancelled).

15. (Cancelled).

16. (Cancelled).

17. (Cancelled).

18. (Cancelled).

19. (Cancelled).

20. (Currently Amended) The foamed isocyanate-based polymer defined in claim 1, wherein the isocyanate is selected from the group ~~comprising~~ consisting of 2,4-toluene diisocyanate, 2,6-toluene diisocyanate and mixtures thereof.

21. (Currently Amended) The foamed isocyanate-based polymer defined in claim 1, wherein the isocyanate is selected from the group consisting essentially of (i) 2,4'-diphenylmethane diisocyanate, 4,4'-diphenylmethane diisocyanate and mixtures thereof; and (ii) mixtures of (i) with an isocyanate selected from the group ~~comprising~~ consisting of 2,4-toluene diisocyanate, 2,6-toluene diisocyanate and mixtures thereof.

22. (Previously Presented) The foamed isocyanate-based polymer defined in claim 1, wherein the blowing agent comprises water.

23. (Cancelled).

24. (Cancelled).

25. (Previously Presented) The foamed isocyanate-based polymer defined in claim 1, wherein the reaction mixture comprises phenolic resin in an amount of up to about 20 parts by weight per 100 parts by weight of active hydrogen-containing compound used in the reaction mixture.

26. (Previously Presented) The foamed isocyanate-based polymer defined in claim 1, wherein the reaction mixture comprises phenolic resin in an amount in the range of from about 1.0 to about 15 parts by weight per 100 parts by weight of active hydrogen-containing compound used in the reaction mixture.

27. (Previously Presented) The foamed isocyanate-based polymer defined in ~~claim~~ 1, wherein the reaction mixture comprises phenolic resin in an amount in the range of from about 1.0 to about 10 parts by weight per 100 parts by weight of active hydrogen-containing compound used in the reaction mixture.

28. (Previously Presented) The foamed isocyanate-based polymer defined in claim 1, wherein the reaction mixture comprises phenolic resin in an amount in the range of from about 2.0 to about 20 parts by weight per 100 parts by weight of active hydrogen-containing compound used in the reaction mixture.

29. (Previously Presented) The foamed isocyanate-based polymer defined in ~~claim~~ 1, wherein the phenolic resin

comprises a molecular weight in the range of from about 200 to about 3000.

30. (Cancelled).

31. (Currently Amended) The foamed isocyanate-based polymer defined in claim 1, wherein the phenolic resin comprises a melting point in the range of from ~~about~~ 75°C to ~~about~~ 100°C.

32. (Previously Presented) The foamed isocyanate-based polymer defined in claim 1, wherein the phenolic resin comprises a functionality in the range of from about 2 to about 8.

33. (Previously Presented) The foamed isocyanate-based polymer defined in claim 1, wherein the phenolic resin comprises less than about 0.05 % by weight phenol.

34. (Previously Presented) The foamed isocyanate-based polymer defined in claim 1, wherein the phenolic resin comprises less than about 0.05 % by weight formaldehyde.

35. (Previously Presented) The foamed isocyanate-based polymer defined in claim 1, wherein the phenolic resin comprises less than about 0.05 % by weight phenol and formaldehyde.

36. (Previously Presented) A molded foam comprising the foamed isocyanate-based polymer defined in claim 1.

37. (Previously Presented) A slab foam comprising the foamed isocyanate-based polymer defined in claim 1.

38. (Currently Amended) A process for producing a foamed isocyanate-based polymer comprising the steps of:
contacting an isocyanate, an active hydrogen-containing compound, a phenolic resin and a blowing agent to form a reaction mixture; and

expanding the reaction mixture to produce the foamed isocyanate-based polymer;

wherein the phenolic resin: (i) is ~~substantially~~ completely free of ether moieties, and (ii) comprises a melting point in the range of from 50°C to 100°C.

39. (Currently Amended) The process defined in claim 38, wherein the active hydrogen-containing compound is selected from the group ~~comprising~~ consisting of polyols, polyamines, polyamides, polyimines and polyolamines.

40. (Original) The process defined in claim 38, wherein the active hydrogen-containing compound comprises a polyol.

41. (Cancelled).

42. (Cancelled).

43. (Cancelled).

44. (Original) The process defined in claim 40,
wherein the polyol is a polyether polyol.

45. (Original) The process defined in claim 44,
wherein the polyether polyol has a molecular weight in the range
of from about 200 to about 10,000.

46. (Original) The process defined in claim 44,
wherein the polyether polyol has a molecular weight in the range
of from about 2000 to about 7,000.

47. (Original) The process defined in claim 44,
wherein the polyether polyol has a molecular weight in the range
of from about 2,000 to about 6,000.

48. (Cancelled).

49. (Cancelled).

50. (Cancelled).

51. (Cancelled).

52. (Cancelled).

53. (Cancelled).

54. (Cancelled).

55. (Cancelled).

56. (Cancelled).

57. (Currently Amended) The process defined in claim 38, wherein the isocyanate is selected from the group ~~comprising~~ consisting of 2,4-toluene diisocyanate, 2,6-toluene diisocyanate and mixtures thereof.

58. (Currently Amended) The process defined in claim 38, wherein the isocyanate is selected from the group consisting essentially of (i) 2,4'-diphenylmethane diisocyanate, 4,4'-diphenylmethane diisocyanate and mixtures thereof; and (ii) mixtures of (i) with an isocyanate selected from the group ~~comprising~~ consisting of 2,4-toluene diisocyanate, 2,6-toluene diisocyanate and mixtures thereof.

59. (Previously Presented) The process defined in claim 38, wherein the blowing agent comprises water.

60. (Cancelled).

61. (Cancelled).

62. (Previously Presented) The process defined in claim 38, wherein the reaction mixture comprises phenolic resin in an amount of up to about 20 parts by weight per 100 parts by weight of active hydrogen-containing compound used in the reaction mixture.

63. (Previously Presented) The process defined in claim 38, wherein the reaction mixture comprises phenolic resin in an amount in the range of from about 1.0 to about 15 parts by weight per 100 parts by weight of active hydrogen-containing compound used in the reaction mixture.

64. (Previously Presented) The process defined in claim 38, wherein the reaction mixture comprises phenolic resin in an amount in the range of from about 1.0 to about 10 parts by weight per 100 parts by weight of active hydrogen-containing compound used in the reaction mixture.

65. (Previously Presented) The process defined in claim 38, wherein the reaction mixture comprises phenolic resin in an amount in the range of from about 2.0 to about 20 parts by weight per 100 parts by weight of active hydrogen-containing compound used in the reaction mixture.

66. (Previously Presented) The process defined in claim 38, wherein the phenolic resin comprises a molecular weight in the range of from about 200 to about 3000.

67. (Cancelled).

68. (Currently Amended) The process defined in claim 38, wherein the phenolic resin comprises a melting point in the range of from ~~about~~ 75°C to ~~about~~ 100°C.

69. (Previously Presented) The process defined in claim 38, wherein the phenolic resin comprises a functionality in the range of from about 2 to about 8.

70. (Previously Presented) The process defined in claim 38, wherein the phenolic resin comprises less than about 0.05 % by weight phenol.

71. (Previously Presented) The process defined in claim 38, wherein the phenolic resin comprises less than about 0.05 % by weight formaldehyde.

72. (Previously Presented) The process defined in claim 38, wherein the phenolic resin comprises less than about 0.05 % by weight phenol and formaldehyde.

73. (Cancelled).

74. (Cancelled).

75. (Currently Amended) A liquid mixture comprising an active hydrogen-containing compound and a phenolic resin ~~substantially completely~~ (i) that is free of ether moieties, (ii) comprises a melting point in the range of from 50°C to 100°C.

76. (Currently Amended) A method of conferring a load bearing property to an isocyanate-based polymer foam comprising the step of incorporating a phenolic resin ~~substantially completely~~ (i) that is free of ether moieties, (ii) comprises a melting point in the range of from 50°C to 100°C, in a formulation used to produce the foam.

77. (Currently Amended) A method of conferring an energy absorbing property to an isocyanate-based polymer foam comprising the step of incorporating a phenolic resin ~~substantially completely~~ (i) that is free of ether moieties, (ii) comprises a melting point in the range of from 50°C to 100°C, in a formulation used to produce the foam.